

人工智能 -- 机器学习

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-- 机器学习与深度学习

AI/A Modern Approach 机器学习与深度学习 Nature Magazine AlphaGo Zero paper [1]

AlphaGo 机器学习与深度学习 leukotomy 机器学习与深度学习

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机器学习与深度学习

机器学习与深度学习

talent pool 机器学习与深度学习

机器学习与深度学习

Karl Raimund Popper 机器学习与深度学习

Marvin Minsky 机器学习与深度学习 emotion animal liberal arts mathematics sciences

AI: A Modern Approach 机器学习与深度学习

Marvin Minsky 机器学习与深度学习 AlphaGo Zero paper 机器学习与深度学习

superhuman 机器学习与深度学习 superhuman 机器学习与深度学习

Technological Singularity 机器学习与深度学习

[2]

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liberal arts/natural languages / philosophies

AlphaGo

Deepmind 4 [4]

AlphaGo Master 三星棋院 AlphaGo Master 三星棋院 AlphaGo Master 三星棋院
三星棋院 AlphaGo Zero 三星棋院 AlphaGo Master 三星棋院 AlphaGo Master 三星棋院

AlphaGo Zero が AlphaGo Master を破った[5]。AlphaGo Master は 16 該当で AlphaGo Zero が 18 該当。AlphaGo Zero が 14-16-45 の成績を記録した。

11 Nature Magazime 『AlphaGo』Deepmind 『AlphaGo Zero』AlphaGo Master 『AlphaGo SuperMaster』

2) AlphaGo Zero یک local trap را در میان اینها باز کرد. AlphaGo Zero یک local trap را در میان اینها باز کرد. AlphaGo Zero یک local trap را در میان اینها باز کرد. AlphaGo Zero یک local trap را در میان اینها باز کرد.

□ AlphaGo Zero □□ AlphaGo Master□□□□□ AlphaGo Master □□□□□□□□□□□□□□□□
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AlphaGo Zero 7 game

Superhuman چیزی که این را می‌داند Clock چیزی که IBM S/360 چیزی که
آن را می‌داند AlphaGo Zero چیزی که superhuman IBM S/360 چیزی که superhuman
آن را می‌داند AlphaGo Zero چیزی که Nature Magazine چیزی که AlphaGo Zero paper چیزی که
superhuman چیزی که آن را می‌داند

超人級人工智能 Technological Singularity
Demis Hassabis AlphaGo

Deepmind team AlphaGo Deepmind team AlphaGo

AlphaGo Zero AlphaGo Zero superhuman [8] superhuman superhuman deep-learning reinforcement superhuman superhuman

AlphaGo AlphaGo [9]

图灵机 Turing Machine ⊞ deep-learning ⊞ AlphaGo ⊞ 神经网络神经元
AlphaGo Zero ⊞ AlphaGo Master ⊞ AlphaGo Zero ⊞ AlphaGo Zero ⊞

Deep-learning 机器学习 人工智能 神经网络 credit 赞誉 reinforcement 强化 local trap 本地陷阱 AlphaGo

[11]

□□□□□□□□□□

[12]

图灵机 Turing Machine 图灵完备性 Turing completeness
图灵机 Turing Machine local trap Universal approximation

Socratic method

Alan Turing Geoffrey Hinton Demis Hassabis AlphaGo

Demis Hassabis 『AlphaGo』 [13] Geoffrey Hinton

Turing Machine Turing Machine Geoffrey Hinton Turing Machine Alan Turing

Dialogue Concerning the Two Chief World Systems [14]

Socratic method [15]

The Sceptical of Chemist

On the Origin of Species

[16]

Leukotomy BRAIN Initiative

Leukotomy

personalities mental diseases personalities BRAIN Initiative project

[17]

Leukotomy BRAIN Initiative

Leukotomy

1 personalities mental diseases personalities BRAIN Initiative project

2 leukotomy Leukotomy BRAIN Initiative AlphaGo

3 personality intelligence Walter Freeman personality intelligence

BRAIN Initiative project NIH BRAIN 2025 Report “there is general agreement that types can be defined provisionally by invariant and generally intrinsic properties” invariant agreement

insights “envision an integrated, systematic census of neuronal and glial cell types” dynamic brain mapping “Link brain activity to behavior” “Produce conceptual foundations for understanding the biological basis of mental processes” mental processes behavior

BRAIN Initiative project 项目 personality 个性 intelligence 智力 brain mapping 大脑成像 personality 个性 intelligence 智力 hidden assumptions 隐含假设

personality intelligence

□ BRAIN Initiative project □ brain mapping □ mental diseases □ personality □ intelligence □ leukotomy □

脑白质切开术与AlphaGo

个性、智力和精神疾病 personality, intelligence, mental diseases

BRAIN Initiative ◻ brain mapping ◻
human level intelligence ◻
personalities ◻ intelligence ◻ mental diseases ◻
BRAIN Initiative ◻ neurosciences ◻
AlphaGo ◻ generic human intelligence ◻
AlphaGo ◻
neurosciences ◻ [18] ◻

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Technological Singularity BRAIN Initiative project Technological Singularity baseless

AlphaGo Zero achieved superhuman performance

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[2] 人工智能技术与人类文明的未来展望 Technological Singularity 人工智能 AlphaGo Zero 与 superhuman 人工智能

[3] 亂世の政治家たち

Figure 1. A schematic diagram of the experimental setup for the measurement of the absorption coefficient.

[4] 『Cracking Go』 Deep Blue が世界初の棋王棋士を破った。AlphaGo が世界初の棋王棋士を破った。AlphaGo が世界初の棋王棋士を破った。

[6] AlphaGo Master 『AlphaGo Master』
https://www.youtube.com/watch?v=JGQHgkWzXjU

[7] 『AlphaGo』战胜人类围棋冠军，成为史上首位超人棋手
https://www.youtube.com/watch?v=KoqCmDyfIwU

『AlphaGo』战胜人类围棋冠军，成为史上首位超人棋手
Turing Machine の limitation 『AlphaGo』战胜人类围棋冠军
『AlphaGo』战胜人类围棋冠军

『AlphaGo』战胜人类围棋冠军，成为史上首位超人棋手
Crazy Stone『AlphaGo』战胜人类围棋冠军
『AlphaGo』战胜人类围棋冠军

『AlphaGo』战胜人类围棋冠军，成为史上首位超人棋手
『AlphaGo』战胜人类围棋冠军
『AlphaGo』战胜人类围棋冠军

『AlphaGo』战胜人类围棋冠军，成为史上首位超人棋手
Google 『AlphaGo』战胜人类围棋冠军
『AlphaGo』战胜人类围棋冠军
AlphaGo Zero『AlphaGo Zero』战胜人类围棋冠军
Human level artificial intelligence
『AlphaGo』战胜人类围棋冠军
『AlphaGo』战胜人类围棋冠军

『AlphaGo』战胜人类围棋冠军
Google/Deepmind 『AlphaGo』战胜人类围棋冠军
『AlphaGo』战胜人类围棋冠军

[8] <http://www.alphago-games.com/> Full Strength of Alphago Zero, i.e. Final Form
40 Blocks
20 Blocks
Not Full Strength of Alphago Zero
Alphago Zero
Alphago Zero
superhuman
superhuman

[9] 2012 年 1 月 13 日，谷歌 DeepMind 公司的李世石九段与谷歌自主开发的围棋程序 AlphaGo 对弈，最终以 4:1 的总比分获胜。

[10] 『AlphaGo』：“Go gaming is strictly defined within a very small space. Industrial automations are typically designed in well controlled environments, but not strictly defined. Car driving is regulated, but the environment is not well controlled”

『AlphaGo』：“Go gaming is strictly defined within a very small space. Industrial automations are typically designed in well controlled environments, but not strictly defined. Car driving is regulated, but the environment is not well controlled”

[11] 『AlphaGo』战胜人类围棋冠军
『AlphaGo』战胜人类围棋冠军

[12] 『AlphaGo』战胜人类围棋冠军
『AlphaGo』战胜人类围棋冠军
『AlphaGo』战胜人类围棋冠军

AlphaGo არის ერთ-ერთი უძველესი მოგზაური

[13] AlphaGo Master AlphaGo AlphaGo AlphaGo AlphaGo AlphaGo AlphaGo AlphaGo

[14] Dialogue Concerning the Two Chief Word Systems 二元論對話 Socratic Method
蘇格拉底方法

AlphaGo

A decorative horizontal bar consisting of a series of vertical tick marks, similar to a ruler scale, positioned at the bottom of the page.

[15] 『**AlphaGo**』と「**AlphaGo**」の違い

AlphaGo BRAIN Initiative project

[16] Leukotomy ဣဗောဓါနBRAIN Initiative project ဣဗောဓါနBRAIN Initiative ။
BRIAN Initiative။

theorems suggest metaphysics from humans may not work

[18] 『AlphaGo』と『DeepMind』のAI研究者たちが、AlphaGoの勝利を祝う